ENTERED



1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/776,705B

DATE: 08/11/2003 TIME: 12:31:10

Input Set : A:\1010 SEQ LISTING.TXT

Output Set: N:\CRF4\08112003\I776705B.raw

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4 <11) APPLICANT: Karl GUESLER et al.
 5 <120 TITLE OF INVENTION: ISOLATED HUMAN TRANSPORTER PROTEINS,
               NUCLEIC ACID MOLECULES ENCODING HUMAN TRANSPORTER PROTEINS,
               AND USES THEREOF
10 <130 FILE REFERENCE: CLOSIOIO
1. <140 - CURRENT APPLICATION NUMBER: 09/076,705B
1 < < 141 - CURRENT FILING DATE: 2001-02-96
15 <150 - PEIGE APPLICATION NUMBER: 60/251,836
16 4151 PRIOR FIGURE DATE: 2000-12-03
1% <160 - NUMBER OF SEQ ID NOS: 78
Bu <170 - SOFTWARE: FastSEQ for Windows Version 4.0
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25 (211 - DENGTH: 1822
34 KOND - TYPE: DNA
25 <215 · ORGANISM: Homo Sapiens
.:7 <400 · SEQUENCE: 1
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.19 tyotyaabat caacabaaaay tygaayaaco ttaaqotyaa gytacaytat attatttaca 110
^{2}O orga_{0}ggggo tigitgitgig abaa_{3}aaago got_{3}botga_{0}agot baa_{4}tga_{2}bo_{3}botgaa_{2}botgaa_{3}botgaa_{3}botgaa_{4}botgaa_{2}botgaa_{3}botgaa_{4}botgaa_{2}botgaa_{3}botgaa_{4}botgaa_{2}botgaa_{3}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4}botgaa_{4
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32 chacutcagg ataggasatt cagassaggo agcaatgago agtcaatttg ctaatgaaga 300
is custqaaaqt caqaaattos tqacaaatgg attitigggg aaaaaagaago tggsagatta 360
_{2}4 twotgatgas cappatocog gasocaptic offtggastg foffbathts acotgagtas 410
20 tyccatcaty ggcagtygga toctyggott gtoctatycc atygoctaca caggygtoat 400
50 abtititiata athatgoigo tigoigigo aataitatoa oigiaticag ticabottit 540
z7 aktawaaaca gobaaggaag gagggtistit gattiatgaa aaattaggag aaaaggcatt 666
of tigatggoog ggaaaasttg gagottttgt tiocattaba atgbagaaca tiggagcaat 660
39 glicalgotad ototttatoa thaaatatga actadotgaa gtaatoagag battoatggg 710
40 antiquagaa aatactqgag aalgytacci caatgycaac tacctcatca tatttytyte 780
4) tyttiggaatt attottocad titogetoot taaaaaattta ggitatottig getataedag 84%
40^{\circ} tyganittot ottacotyca tygtytttti tyttagtyny ytgattiaca agaaattoca 90\%
4\pi autalectic objetacety striggatea captytigga Garcigical icaacaacab 960
4% gotticaatg catotogotaa tottacoccaa caactotogag agitotogatg togaacitcat 10%0
4: gatgqattac acceasegsa atcetgeagg getggatgag aaccaggeea agggetetet 10%0
40 thatqacagt qqaqtaqaat atqaaqctca taqtqatqac aaqtqtqaac ccasatactt 1140
4^\circ tytartoaac toocggaegg cotatgeaat tootatocha gtattigett tigtatgeba 11^\circ 0
40 contraggio ottoppatot adagigaadi taaagalogg toooggagaa aaatgbaaab 1,60
4\% gatqtesaat atttocatea egggjatget tqteatgtae etgetlgeeg eestetitgg 1.3\%
f(-t)ac\phitsac\phi tictatggag aagtigaaga igaattacti datgootaca gcasagtgia 1\%0
13 taca: tagas atocototto toatggitog cotggoagto ottgtggoag taacacaaan 1440
40^{\circ} totococatt greetettee caatiegtad atmagrgate acaetgraat these asseg 1^{\circ} \%
{\mathbb R}_2 accounced typetacque attrophysic todadotyty objeticae trastactyt {\mathbb R}^2
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54 tetgyteate ettgtgecaa etataaaata eatettegga tteatagggg ettettetge 1920

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/776,705B

DATE: 08/11/2003 TIME: 13:31:16

Input Set : A:\1010 SEQ LISTING.TXT
Output Set: N:\CRF4\08112003\I776705B.raw

55 cactalgety attittatic tipeagesyt tilltatett äääettyteä äyäääyäääe 1680 No tittaggrod krokaaaagg toggygoiit äärtitooti ütgytiggaa tuttoiioat 1740 57 gattygaag: afgqoactca ttatwattga ctggattfat gutcctccaa aftccaugca 1800 57 toactaacan auggaaaaat ac 6: - 310 - SEQ IL MO: 2 61 <311> LENGTH: 547 6 <212> TYFE: PRT 6 + < 313 ≥ ORGANISM: Homo Sapiens 6 - <400> SEQUENCE: 2 66 Met Asp Pro Met 312 Leu Arq Ash Yal Ash Ile Glu Pro Asp Asp Glu 6 : : 10 6 Ser Ser Ser Gly Hu Ser Ala Pro Asp Ser Tyr Ile Arg Ile Gly Asn 35 2.0 30 Ser Gru Lvs Ala Ala Met Ser Ser Sin Phe Ala Asn Glu Asp Thr Glu ~i 3~ 40 7. Ber G.r. Lys Fne Lei Thr Asn Gly Phe Leu Gly Lys Lys Lys Leu Ala 5.5 60 74 Asp Tyr Ala Asp Glu His His Pro Gly Thr Thr Ser Phe Gly Met Ser 7.0 75 io Sar Pha Abn beu Ser Asr. Ala Ila Met Gly Ser Gly Ila Lau Gly Lau 77.7 35 90 95 7- Ser Tyr Ala Met Ala Tyr Thr Gly Val Ile Leu Phe Ile Ile Met Leu 94 100 1.05 6. Leu Ala Val Ala lie Leu Ser Let Tyr Ser Val Eis Leu Leu Leu Lys 1:5/ 120 1.15 E Thr Ala Lys Glu Gly Gly Ser Leu lle Tyr Glu Lys Leu Gly Glu Lys £ 4 130 1 35 1.40 84 Ala Phe Gly Trp Pro Gly Lys Ile Gly Ala Phe Val Sor Ile Thr Met 160 155 16080 Gln Asr Ile Gly Ala Met Ser Ser Tyr Leu Phe Ile Ile Lys Tyr Glu 165 170 175 85 Leu Pro Glu Val II.e Arg Ala Phe Met Gly Leu Glu Glu Asr. Thr Gly 185 \$4. 14. 180 Bo Ghu Trp Tyr Leu Asn Gly Asn Tyr Leu Ile Ile Phe Val Ser Val Gly 1.45250 2015 9. The Ille Lou Pro Leu Ser Leu Leu bys Ash Leu Gly Tyr Lou Gly Tyr 9.3 210 215 220 94 Thr Ser Gly Phe Ser Leu Thr Cys Met Val Phe Phe Val Ser Val Val 230 235 Se I.a Tyr Lys Lys Phe Gln IIa Pro Cys Pro Leu Erc Val Leu Asp His 245 250) E, E, 98 Ser Val Gly Ash Leu Ser Phe Ash Ash Thr Leu Pro Met His Val Val 265 270 G 4 260 100 Met Leu Pro Ash Ash Ser Glu Ser Ser Asp Val Ash Phe Met Met Asp 280 .285 102 Tyr Thr His Arg Asn Pro Ala Gly Leu Asp Glu Asn Gln Ala Lys Gly 2.95 300 104 Ser Leu His Asp Ser Gly Val Glu Tyr Glu Ala His Ser Asp Asp Lys 105 305 310 315 320

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/776,705B

CATE: 08/11/2003
TIME: 12:31:16

Input Set : A:\1010 SEQ LISTING.TXT

106 107		Glu	Pro	Lys	Tyr 325	Phe	Val	Phe	Asn	Ser 330	Arg	Thr	Ala	lyr	Ala 335	ile	
		lle	Leu	V (1. 310		Ala	Phe	Vetl	Cys 345		Pro	Glu	Val	Leu 350	Pro	fle	
	Tyr	Ser	Glu 355		LΣΞ	Asp	Arg	Ser 360		Arş	Lys	Met	Gln 365		Vál	Ser	
		:1e 370		11.0	Thr	-	Met 375		Väl	Met	Туг	Leu 380		Æla	Al s	Leu	
11.			Tyr	Legic	Trir			$\Im \mathbb{L} \gamma$	G1.	Val	G1: 395		Glu	Leu	Let	His 400	
		$\mathbb{L} \lambda t_i$	Ser	Lys	Val 405		Thir	ī.esu	$\hat{A}.\hat{\epsilon}(\xi)$	I le 410		Leu	L∙eù	Met	Val 415		
11 %	Ir i	Ala	Val	Leid 4.10		Ala	V-ā l	Thr			Val	Pro	Lle		Leu 41:	Phe	
	P: 0	! 1 e			Ser	Vāl	lle		425 Deu	L⊕u	Phe	Pro		430 Ang	Pro	Phe	
			435 Ile	Arq	Ніг	Phe		440 IJe	Ala	Ala	Val		445 Ele	Ala	Let	Asn	
12:		450 Val	Leu	Val	Il⊕		455 Val	Pro	Tr.r	Ile		460 Tyr	Lle	Ehe	Gly		
120	465 11e	Gly	Ala	Sorr		470 Ala	Thr	Met	Leu		475 Prie	I l∈	Lei	Fro	Ala	480 Val	
	Phe	Тут	Leu		485 Leu	Vāl	Lys	Lys		490 Thr	Phe	Arg	S⊛r		495 Gln	Lys	
	V.: 1	.31 y		500 Leu	Il∈	Phe	Leu		505 Val	Gly	Ile	Phe		510 Met	Ile	Gly	
			515 Ala	Leu	Ile	Ile		520 Asp	Trp	I læ	Tyr		525 Pro	Pro	Asn	Ser	
134	_	His	His				535					540					
135			EQ II														
140	139 HU11: LENGTH: 32373 140 HU12: TYPE: DNA																
141 - T13 - ORGANISM: Homo Sapiens 143 - 4400 - SEQUENCE: 3																	
		-				-										gtaaac	
																gtgtc gaatt	
					-	-		-		-	_			_	-	tgaaa	
																ataga	
																gaatto	
																cagaa	
																ttåge	
																gotgag	
																itttgd	
																accapt	
																ggtttt	
																itgaaa	
157	a• at	itatq	gat t	ctca	aatt	g ta	aaaq	gtatt	. tta	attaa	acta	aaat	aatt	ag .	gagto	gtagga	840

RAW SEQUENCE LISTING DATE: 09/11/2001 PATENT APPLICATION: US/09/776,705B TIME: 12:31:16

Input Set : A:\1010 SEQ LISTING.TXT

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			aaaaagsttt	-		_	11, 15 31, 13
			cagaaaccgt				17.30
			gaaaaccttt				1000
10			ttabttatat				1140
				-		•	1.00
			taggotgoot				1. 60
163			ctatttttt				
_			tatitatgtt				1 :. 0 1 : 4 0
			atatttgaac			adattootat	1.10
1			tottttttta				3.5.00
168			ttataagtot				
	-		tttaagaatt	_	_		1560
			ataatgtttt				1.6.10
		-	titottitta				1,680
			ttagatgiga				1740
			tgtgttdtat				1800
			caaaaaagta				1560
			gtcagaggaa				19.0
			aagatttoot				1,990
			tgtttataat				.1일출인
			aagaaattat				2100
			todadedett				
			gotgagatoc				
			aaatacattt				
			ttottttgtt				
		-	taaacttgat			-	
			tgtccaatta				
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	-		aacatgtatc				
			tttcttttt				
			tataaatato				1700
			otitottgta				2760
			tettteette				
			ttdatttaaa				
			gaacatcaac				
			aggggettgt				3000
			aatgtcaaca	-			Ether)
			atogggatag	_			3120
			gttccatgga	_			3180
1.97	agggtottga	tgggaagaac	tggatttatt	acaggtaaat	ttgtgataac	aatgatattg	3040
198			tggtcctgaa		-		2300
			caatgtettt				
			tottatottt				
			ettttetete	-		-	- 4 - ()
			ccaaatatat				$j \in \mathcal{J}(j)$
(, ,	ctgaatttca	gataattata	totgaatgto	tactgcacgt	ctctactgga	ccattactgt	F F (1 (1)
			aaagttaaac		_		3660
			cctctagtaa				3710
200	tgtagcaact	cactcaaaag	occetaggtg	taaactttga	occadatago	caacggtcag	3780

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/776,705B TIME: 12:31:16

DATE: 08/11/2007

Input Set : A:\1010 SEQ LISTING.TXT

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	totactgtgg					
		_				-
	ctctccstgt					
	totottabaa					
	ccaatagoca					
. 1.						getabttgtt 4140
	goottoacto					
						agostitico 4.69
.11			gtagaagtga			
. 12.6						doadotgoda 4:50
						attteecada 4440
. 1						tgaddaaatd (fini)
						ttabaacadb 4160
						gbaatgaabt in u
						otaaattagg 4000
						dagagtagtt 4740
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	aaccaacago	tgottttdaa	ggatgagatg	ggtgaccaga	atatagatga	dattdaatad 4900
5	ttttttatta	attataatta	actgcattac	cotcagtaaa	ttgattcaaa	cotgaggatg 44.0
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	accetectaa					
	agcatgaatg					
129	ottttatoto	otggottaaa	cataggacat	cattttgcag	tttttaaaat	cagtttaaag 5160
230	agatgggttt	tatotatgtg	tggtttggat	tgaaccctta	aatgtaaatt	tttgagaaat 51.70
231						gotgggtttg 52×0
113.1	gtatcaaaac	atttaacata	ctggggacat	ttotoatota	ttttatacaa	tottggcatg 5340
د قات.	ttaaatgact	acaactcatc	toatgocaaa	ataagaacat	gcaaatgcct	caaagaaaga 5400
4						gattttagtt 54m0
. 35						tttttatagt 5510
(f)						tgtgaacatt 55%0
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4.7	caataattat	tttctatttt	atttctaagg	tttatttatt	tatttattga	gadagadaga kilibi:
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. 4 5	tgcctcccag	gttcaagcga	ttataatgat	toagoctoct	gagtagetgg	gattacaggo 6110
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.147	tggccaggct	ggtottgaac	tectgacete	aagttatoca	obcapathag	dotoddaaag 6240
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1411	tottoaatta	ttttatcttt	otttatottt	cttttcatgt	aggaaatgtc	dtaaaatttt (360
						tatataaaaa (4.0
10.2						caggoottat 6460
52	taattgagdd	tottggaaat	gtggatggta	ctaggtocgt	agcotoaaag	goodtggatt £540
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						tttatttaaa mõnio
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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/776,705B

DATE: 08/11/2003 TIME: 12:31:17

Input Set : A:\1010 SEQ LISTING.TXT

STATISTICS SUMMARY

DATE: 08/11/2003 TIME: 12:31:17 PATENT APPLICATION: US/09/776,705B

Input Set : A:\1010 SEQ LISTING.TXT

Output Set: N:\CRF4\08112003\I776705B.raw

Application Serial Number: US/09/776,705B

Alpha or Numeric or Xml: Numeric

Application Class:

Application File Date: 02-06-2001

Art Unit: 1600

Software Application: FastSEQ Total Number of Sequences: 78

Total Nucleotides: 67094 Total Amino Acids: 647 Number of Errors: 0 Number of Warnings: 0 Number of Corrections: 0

MESSAGE SUMMARY